produce a depression at the bottom of the regenerator which will be equal, neglecting the resistance to their flow, to

$$6\left(\frac{1.29}{2.X\,273}\right.$$

To sum the matter up, when a chamber is filled with a light gas and the line at which its pressure is in equilibrium with the atmospheric pressure is at or below the lowest point of the chamber, the pressure in the upper part of the enclosure will be higher than atmospheric pressure. If the line of equilibrium with the atmospheric pressure passes through or above the upper part of the chamber, the pressure at the lowest point in the chamber will be negative. In other words: when a light gas ascends it will create a pressure; conversely, to force a light gas to pass down-ward, it is necessary to create a depression.

V. THE APPLICATION TO HOT GASES OF THE LAWS FOR THE FLOW OF LIQUIDS THROUGH AN ORIFICE IN THE BOTTOM OF THE RESERVOIR.

For water flowing into air the formula is:

in which Q= the volume of liquid flowing;
h= the head of the liquid above the orifice;
= *the* theoretical velocity of flow;
co = the area of the orifice;
/ci = the coefficient for the contracted vein, that is, the ratio between the area of the contracted vein and co (generally KI = 0.64) ;
/C2=the coefficient of velocity, that is, the ratio between the actual velocity at the contracted vein and the theoretical velocity (generally /C2 = 0.97).

If it is desired to apply this formula to the flow of kerosene through an orifice in the top of a bell glass immersed in a vessel of water, it is necessary to determine exactly what is meant by the

head A.